

## Outline of Discussion Topics for Nutrients Non-degradation Discussion

*Everyone: Please provide feedback on this outline which can become our agenda.*

1. **Major steps in addressing non-degradation for nutrient standards (assume nutrient criteria will be exceeded during growing season; case study is a new mine)**
  - a. Institute BMPs and engineering solutions to meet criteria
  - b. Apply for authorization to degrade (if helpful)
  - c. Evaluate potential for a temporary classification on the stream
2. **Detailed Breakout Discussion of Topics in 1**
  - a. Evaluate all BMPs and engineering that might allow attainment of the nutrient criteria during their period of application
    - i. Blasting BMPs (stem plugs, thicker bulk emulsion, packaged explosives)
    - ii. Reasonable treatment of mine water
      1. What might a reasonable treatment level look like? 10 mg TN/L? 20?
      - 1-2. Butte Highlands used RO
    - iii. Seasonal storage for disposal after the criteria period
    - iv. Evaporative cooling
    - v. Dust control
    - vi. Application at agronomic rates at a nearby location (or build pipe to it)
    - vii. Pipe to downstream location where adequate dilution is available
    - viii. Trading?
    - ix. Development of site-specific criteria
    - x. Others? Discuss
  - b. Given considerations in a, will an authorization to degrade up to the standard help?
    - i. **YES:** Apply for authorization to degrade
      1. Details of what are needed are already adopted in rule (see **Appendix A**)
      2. Is more needed? Ideas?
    - ii. **NO:** Evaluate potential for a temporary classification on the stream
      1. Is stream remote and difficult to access? Does steep gradient/high velocity make stream dangerous to wade? All depths  $\leq 0.5$  m?
  - c. Criteria for a stream having temporary use-class removal
    - i. Criteria focus on protecting fish in streams with naturally-high re-aeration levels which maintain dissolved oxygen (Rosgen A, B, E, and G)
    - ii. Discuss potential nutrient criteria for temporary class
    - iii. Discuss how long the temporary class can be in effect
3. **Non-degradation and nutrients in the off-season**
  - a. Discuss rule language to define technology-based nutrient levels for the off-season that can be used to define nondegradation for the off season (~ October to June)

**Commented [TL1]:** Mike, I think regardless, from EPA's perspective, they would need to apply for an authorization to degrade. I will confirm but I'm pretty sure that is the case.

**Commented [TL2]:** EPA would need to review and approve these as well.

**Commented [TL3]:** ??

**Appendix A. Rules Addressing Authorization to Degrade State Waters. The bolded text are the most pertinent**

**17.30.706 INFORMATIONAL REQUIREMENTS FOR NONDEGRADATION**

**SIGNIFICANCE/AUTHORIZATION REVIEW** (1) Any person proposing an activity that may cause degradation is responsible for compliance with 75-5-303, MCA. Except as provided in (2), a person may:

(a) determine for themselves, using the standards contained in ARM 17.30.715 and 17.30.716, that the proposed activity will not cause significant changes in water quality as defined in ARM 17.30.705; or

(b) submit an application to the department pursuant to (3), for the department to make the determination.

(2) The department will determine whether a proposed activity may cause degradation based on information submitted by the applicant for all activities that are permitted, approved, licensed, or otherwise authorized by the department. If the department determines that additional information is necessary to determine whether the activity is nonsignificant according to criteria established by the board, the department may require the applicant to provide the information in (3)(a) through (e).

(3) Any person proposing an activity that may cause degradation and is not an activity included under (2) may complete a department "Application for Determination of Significance." Information required for the application includes, but is not limited to:

(a) quantity and concentration of the parameters expected to change as a result of the proposed activity;

(b) length of time that the water quality is expected to be changed;

(c) character of the discharge;

(d) an analysis of the existing water quality of the receiving water, and any other downstream or downgradient waters which may be reasonably expected to be impacted, including natural variations and fluctuations in the parameter(s) which may change as a result of the proposed activity; or

(e) proposed water quality protection practices.

(4) The department will review an "Application for Determination of Significance" submitted under (3) and make a determination whether the proposed change in water quality is nonsignificant according to ARM 17.30.715 or 17.30.716 within 60 days of receipt of the completed application.

(5) Whenever the department determines that a proposed activity will not result in degradation, the department may require monitoring to verify compliance with this subchapter and 75-5-303, MCA.

(6) Whenever the department determines that a proposed activity will result in degradation, the applicant shall complete an application to degrade state waters if the applicant decides to proceed with the proposed activity as planned. The department will not begin review of the application until the required fee has been paid to the department.

**(7) In order to provide the information that is required for the department to determine whether or not degradation is necessary because there are no economically, environmentally, and technologically feasible alternatives to the**

proposed activity that would result in no degradation, an application to degrade state waters shall include, but not be limited to, the following, when applicable:

- (a) a complete description of the proposed activity;
  - (b) the proposed effluent or discharge limitation(s);
  - (c) a statement of reasons for the proposed effluent or discharge limitation(s);
  - (d) an analysis of alternatives to the proposed activity, consistent with accepted engineering principles, demonstrating there are no economically, environmentally, and technologically feasible alternatives that are less-degrading or non-degrading. The analysis must be limited to only those alternatives that would accomplish the proposed activity's purpose;
  - (e) an analysis of the existing water quality of the receiving water and any other downstream or downgradient waters which may be impacted, including natural variations and fluctuations in the water quality parameter(s) for which an authorization to degrade is requested;
  - (f) the concentration, likely environmental fate, biological effects, and load for each parameter in the discharge likely to degrade existing water quality;
  - (g) the distribution of existing flows and their expected frequency;
  - (h) an analysis demonstrating the expected surface or ground water quality for all alternatives considered in (d);
  - (i) an analysis of the ground water flow system, including water-bearing characteristics of subsurface materials, rate and direction of ground water flow, and an evaluation of surface and ground water interaction;
  - (j) data concerning cumulative water quality effects of existing and authorized activities;
  - (k) a proposed monitoring and reporting plan that will determine the actual water quality changes.
- (8) An applicant must demonstrate that the proposed activity will result in important economic or social development that exceeds the costs to society of allowing the proposed change in water quality.
- (a) Factors to be addressed in the application may include, but are not limited to, the positive and negative effects of the following:
- (i) allowing the proposed change in water quality;
  - (ii) employment considering the existing level of employment, unemployment, and wage levels in the area (i.e., increasing, maintaining, or avoiding a reduction in employment);
  - (iii) the fiscal status of the local, county, or state government and local public schools;
  - (iv) the local or state economies (i.e., increased or reduced diversity, multiplier effects);
  - (v) social or historical values;
  - (vi) public health;
  - (vii) housing (i.e., availability and affordability);
  - (viii) existing public service systems and local educational systems; or,
  - (ix) correction of an environmental or public health problem.
- (b) Factors included in the demonstration required in (8)(a) must be quantified whenever this can be done reliably and cost-effectively. Other factors, which cannot be quantified, may be represented by an appropriate unit of measurement. If the department determines that more information is required, the department may

require additional information from the applicant or seek such additional information from other sources.

**(9) To determine whether or not existing and anticipated uses will be fully protected, the department shall require the following information:**

**(a) a showing that the change will not result in violations of Montana water quality standards outside of a mixing zone; and**

**(b) an analysis of the impacts of the proposed water quality changes on the existing and anticipated uses of the impacted state water.**

**(10) To demonstrate the least degrading water quality protection practices will be fully implemented prior to, during, and after the proposed activity, the applicant shall provide to the department a complete description and schedule for implementation of the water quality protection practices associated with the proposed activity and a viable plan showing the ability to implement the water quality protection practices.**

(11) Any application submitted pursuant to this subchapter must comply with the signature and certification requirements of ARM 17.30.1323.

(12) The department shall notify the applicant in writing within 60 days after receipt of an application to degrade state waters that the application does or does not contain all the information necessary for the department's nondegradation review. If the information from the supplemental submittal and any subsequent supplemental submittal is inadequate, the department shall notify the applicant in writing, within 30 days after receipt of the supplemental submittal, what additional information must be submitted. In any review subsequent to the first, the department may not make a determination of incompleteness on the basis of a deficiency which could have been noted in the first review.

(13) The board adopts and incorporates by reference ARM 17.30.1323, as amended on February 14, 2003, which sets forth signature and certification requirements for MPDES permit applications. A copy of ARM 17.30.1323 may be obtained from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499; AMD, 2003 MAR p. 1274, Eff. 6/27/03; AMD, 2006 MAR p. 528, Eff. 2/24/06.)

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